

Special features of the DNA-hydrolyzing activity of the antibodies in systemic lupus erythematosus

Nevzorova T., Temnikov D., Vinter V.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Two types of IgG anti-DNA antibodies exhibiting DNA-hydrolyzing activity have been isolated from blood serum of patients with systemic lupus erythematosus. This DNase activity of antibodies differs from serum DNases by the non-processive mode, temperature resistance, pH optimum, and the rate of DNA hydrolysis. It is suggested that the anti-DNA antibody molecule possessing DNase activity contains two sites: one site determines specificity of antibody-DNA interaction, whereas the other is responsible for manifestation of the catalytic activity.

Keywords

Abzymes, DNA hydrolysis, IgG, Polyclonal catalytic antibodies, Systemic lupus erythematosus